UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,266	12/06/2001	Krishnamachari Gopalan	85939.000235	5634

23387 7590 02/08/2005

Stephen B. Salai, Esq.
Harter, Secrest & Emery LLP
1600 Bausch & Lomb Place
Rochester, NY 14604-2711

EXAMINER	
PATTERSON, MARC A	
ART UNIT	**PAPER NUMBER**
1772	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/010,266	GOPALAN, KRISHNAMACHARI	
	Examiner	Art Unit	
	Marc A Patterson	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *63-97* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *63-97* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 63 – 97 are objected to because of the following informalities: The meaning of the phrase 'a curing agent' is unclear. For purposes of examination, the phrase will be interpreted to mean either sulfur or peroxide, as sulfur and peroxide are the only components indicated in the specification as facilitating curing. Appropriate correction is required.

NEW REJECTIONS

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 74, 80 – 81, 86 and 92 – 93 are rejected under 35 U.S.C. 102(b) as being anticipated by King (U.S. Patent No. 5,622,008).

With regard to Claims 74, 80 – 81, 86 and 92 – 93, King discloses an automotive weatherseal (weatherstrip; column 3, lines 3 – 5) comprising an elastomeric material comprising ethylene, propylene and diene monomers (therefore EPDM; column 4, lines 46 – 50) that is coextruded from a plurality of extruders through a single die (column 4, lines 46 – 50) therefore forming a multilayer structure comprising the elastomeric material; the material is also coextruded with metal reinforcement strips (column 4, lines

54 – 55) and is subsequently cured with sulfur and/or organic peroxide (column 4, lines 59 – 61); the weatherseal therefore comprises a metal reinforcement, an uncured peroxide curable bonding veneer comprising the elastomeric material directly bonded to a portion of the metal, and an uncured sulfur curable, therefore non – peroxide curable, rubber layer comprising the elastomeric material on a portion of the uncured peroxide curable bonding veneer; the sulfur curable layer includes peroxide, as it is part of the multilayer structure and therefore is in contact with the peroxide curable layer.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 63 – 73, 75 – 79, 82 – 85, 87 – 91 and 94 – 97 are rejected under 35 U.S.C. 103(a) as being unpatentable over King (U.S. Patent No. 5,622,008) in view Drake et al (U.S. Patent No. 5,521,248).

King discloses a multilayer structure comprising a peroxide curable and sulfur curable rubber layer comprising EPDM bonded to metal as discussed above. With regard to Claims 63 – 73, 75 – 79, 82 – 85, 87 – 91 and 94 – 97, King fails to disclose a peroxide curable layer comprising maleinated polybutadiene and methacrylate and directly contacting and encapsulating the sulfur curable layer and encapsulating the metal reinforcement and a metal reinforcement comprising aluminum and an insulating filler to reduce galvanic corrosion.

Drake et al teach a peroxide curable layer (column 2, lines 45 – 58) comprising maleinated polybutadiene (column 8, lines 66 – 67) and methacrylate (column 4, line 17) and directly contacting and encapsulating a sulfur curable layer and encapsulating a metal reinforcement (the layer is flowable over the substrates, and therefore encapsulates the substrates; column 6, lines 45 – 47) and a metal reinforcement comprising aluminum (column 7, lines 7 – 18) and an insulating filler to reduce galvanic corrosion (carbon black; column 5, lines 35 – 37) in the making of a multilayer structure comprising a peroxide curable rubber layer comprising EPDM (column 6, lines 63 – 66) for the purpose of obtaining a multilayer structure having improved adhesion (column 1, lines 15 – 17). Therefore, one of ordinary skill in the art would have recognized the advantage of providing for a peroxide curable layer comprising maleinated polybutadiene and methacrylate and directly contacting and encapsulating a sulfur curable layer and encapsulating a metal reinforcement comprising aluminum of Drake et al in King, which is a multilayer structure comprising a peroxide curable rubber layer comprising EPDM, depending on the desired adhesion of the adhesion of the product as taught by Drake et al.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a peroxide curable layer comprising maleinated polybutadiene and methacrylate and directly contacting and encapsulating a sulfur curable layer and encapsulating a metal reinforcement and an insulating filler comprising aluminum in King in order to obtain a multilayer structure having improved adhesion as taught by Drake et al.

ANSWERS TO APPLICANT'S ARGUMENTS

6. Applicant's arguments regarding the 35 U.S.C. 102(b) rejection of Claims 74, 80 – 81, 86 and 92 – 93 as being anticipated by King (U.S. Patent No. 5,622,008) and 35 U.S.C. 103(a) rejection of Claims 63 – 73, 75 – 79, 82 – 85, 87 – 91 and 94 – 97 as being unpatentable over King (U.S. Patent No. 5,622,008), of record in the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Claim rejections under 35 U.S.C. 102

Claims 74, 80 – 81, 86 and 92 – 93

Applicant argues, on page 12 of the remarks of November 18, 2004, that King does not disclose an uncured sulfur curable layer that includes sulfur because sulfur and peroxide are withheld from the foot disclosed by King.

However, the foot disclosed by King clearly includes sulfur, as it is bonded to the sulfur – cured layer disclosed by King as stated above and therefore includes sulfur in the structure of the weatherstrip disclosed by King.

Claim 86

Applicant also argues on page 13 that the foot of King is not curable, thus the limitation of non – peroxide crosslinkable elastomer is not disclosed in King; the claimed invention, Applicant argues, recites a curing agent in the uncured peroxide curable bonding veneer, which is contrary to the recited purpose of King.

However, King discloses an uncured curable layer, because King discloses the layer is cured if a curing agent is not omitted (column 4, lines 19 – 21). Furthermore, as stated above, the foot disclosed by King includes sulfur, as it is bonded to the sulfur –

cured layer disclosed by King as stated above and therefore includes sulfur in the structure of the weatherstrip disclosed by King.

Applicant also argues on page 13 that the rejections cannot be sustained by a reference which could be modified.

However, it is not necessary for the reference to be modified, because as stated above, King discloses a curable layer that includes sulfur.

Claim rejections under 35 U.S.C. 103

Claims 63 – 73, 75 – 79, 82 – 85, 87 – 91 and 94 – 97

Applicant also argues, on page 14, that King is expressly contrary to having a curing agent in both layers.

However, as stated above, the foot disclosed by King includes sulfur, as it is bonded to the sulfur – cured layer disclosed by King as stated above and therefore includes sulfur in the structure of the weatherstrip disclosed by King.

Applicant also argues on page 16, that the references do not provide any basis for encapsulating the sulfur curable layer of King with the peroxide curable layer of Drake.

However, as stated above, Drake et al teach a peroxide curable layer (column 2, lines 45 – 58) comprising maleinated polybutadiene (column 8, lines 66 – 67) and methacrylate (column 4, line 17) and directly contacting and encapsulating a sulfur curable layer and encapsulating a metal reinforcement (the layer is flowable over the substrates, and therefore encapsulates the substrates; column 6, lines 45 – 47) and a metal reinforcement comprising aluminum (column 7, lines 7 – 18) and an insulating filler to reduce galvanic corrosion (carbon black; column 5, lines 35 – 37) in the making of a multilayer structure comprising a peroxide curable rubber layer comprising EPDM

(column 6, lines 63 – 66) for the purpose of obtaining a multilayer structure having improved adhesion (column 1, lines 15 – 17). Therefore, one of ordinary skill in the art would have recognized the advantage of providing for a peroxide curable layer comprising maleinated polybutadiene and methacrylate and directly contacting and encapsulating a sulfur curable layer and encapsulating a metal reinforcement comprising aluminum of Drake et al in King, which is a multilayer structure comprising a peroxide curable rubber layer comprising EPDM, depending on the desired adhesion of the adhesion of the product as taught by Drake et al.

Claims 63 – 73; Claims 75 – 79 and 82 – 85; Claims 87 – 91 and 94 – 97

Applicant also argues, on page 16, that the claimed structure of a peroxide layer between a metal reinforcement layer and a sulfur curable or non – peroxide curable layer is directly contrary to King.

However, it is unclear how the structures are contrary to King, when King discloses a material coextruded with metal reinforcement strips (column 4, lines 54 – 55) and subsequently cured with sulfur and/or organic peroxide (column 4, lines 59 – 61).

Applicant also argues, on page 19, that there is no basis in either King or Drake et al for adding an extra layer of Drake et al to King, thus increasing costs.

However, the combination of the references is not intended to add an extra layer; as stated above, it would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a peroxide curable layer comprising maleinated polybutadiene and methacrylate and directly contacting and encapsulating a sulfur curable layer and encapsulating a metal reinforcement and an insulating filler

comprising aluminum in King in order to obtain a multilayer structure having improved adhesion as taught by Drake et al.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497. The examiner can normally be reached on Mon-Fri 9Am-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marc Patterson

Marc A. Patterson, PhD.
Examiner
Art Unit 1772

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

1/31/05